

# Linenger writes home; Soyuz docks with Mir

Two Russian cosmonauts and a German cosmonaut researcher docked their Soyuz TM-25 spacecraft with the Mir Space Station on Wednesday, bringing American Jerry Linenger's new crew mates.

Docking occurred on time at 9:52 a.m. CST, and television cameras beamed pictures of the hatch opening and welcome ceremonies back to Earth 90 minutes later.

Mir 23 Commander Vasily Tsibliev, Flight Engineer Alexander Lazutkin and Cosmonaut Researcher Reinhold Ewald launched from the Baikonur Cosmodrome in Khazakstan at 8:09 a.m. JSC time

Monday. When Discovery lifted off early Tuesday with its seven crew members, the three spacecraft tied the record for the most human beings in orbit at one time at 13.

The Mir 23 crew will spend three weeks aboard the orbiting laboratory with Mir 22 Commander Valery Korzun and Flight Engineers Alexander Kaleri and Linenger. Then, Korzun, Kaleri and Ewald—who will have completed his three weeks of microgravity experiments—will return to Earth, leaving Tsibliev, Lazutkin and Linenger on the space station.

Linenger and his Mir 22 crew

mates spent the days preceding the Mir 23 crew's arrival making preparations to house six people aboard the decade-old space station and undocking a Progress vehicle to make room for the upcoming Soyuz spacecraft.

Once the Mir 23 crew bids the cosmonauts and German researcher farewell, the station's occupants will turn their attentions toward a March space walk by Linenger and Tsibliev, the first involving an American crew member using a Russian space suit.

Linenger also is taking time to pen letters home to his 14-month-old

son, and has asked that they be shared with the world on the Internet. The first letter includes these passages:

"I decided before this flight that I was going to be a good father and write to you every day. This is my first attempt at that. I realize that you are only one year old, and although I exaggerate your talents like any proud father would, I don't think that you can quite read this yet. No problem. When you can, you'll feel good knowing that your father loves you.

"Space flight is a dangerous business," Linenger continued. "I used to

be pretty cavalier about it. But just before this launch, I started questioning what I was about to do. You see, I have so, so much to lose now. You and your mother....

"You know, although I am up here floating above the Earth, I am still an earthling. I feel the pain of separation, the pride of a father, and the loneliness of a husband away from his wife like an earthling. And maybe even a bit more acutely," he finished.

For the complete text of the letters, visit the NASA Shuttle-Mir Web at: <http://shuttle-mir.nasa.gov>



JSC Photo by Karen Schmidt

**HOME ON THE RANGE**—One of two longhorn steers delivered to its new JSC feedlot Wednesday struts its stuff for about 1,000 people who attended the Longhorn Project dedication ceremonies. The two steers are expected to be joined by three heifers, and all five will be taken care of by area high school students.

## Longhorn Project blazing new frontiers in education

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donation of two steers and three heifers from longhorn breeders in several states, said he considered it a privilege to participate in the consortium.

"This project is blazing a new frontier with NASA continuing to explore the frontiers of space, the Clear Creek ISD blazing the frontiers of education for our youth, the Houston Livestock Show and Rodeo, which is the leader in the nation at creating frontiers in livestock shows and rodeos, and the Texas Longhorn Breeders Association, which has preserved and protected these Texas longhorn cattle," Baker said. "We are pleased to be a participant and to work hand-in-hand with each of you in this project. We look forward to a long-term relationship for the benefit of youth, NASA and others around the world."

The Longhorn Project came to fruition in six quick months as JSC,

its employees, local industry and members of the community came together to formulate and execute the plan.

"This is really just the first step with the longhorns," Abbey said, "because we're going to have aquaponds and orchards here on the center and we'll have an opportunity to participate with the students in those programs."

The first two steers were herded into the feedlot shortly after volunteers from Johnson Controls World Services put finishing touches on the first building structure, a 20-by-40-foot barn. The materials were donated to the Clear Creek Independent School District by Johnson Controls, and volunteers organized by Bill Shelton built the structure over a period of two weekends.

"Our next order of business is to extend water and electrical service to the project," said Don Holick, project manager for the Center

Operations Directorate. "We have had an excellent response to the Longhorn Project by both Clear Lake and Houston businesses. Centennial Contractors Enterprises Inc. has donated the electrical installation and Warren Electric Co. has donated the electrical materials. T.M. Gryphon Inc. has donated the water line materials and installation. Dow Fence & Supply has just finished the fence around the 8-acre feedlot and the 35-acre pasture. Cost of the fences was underwritten by the Houston Livestock Show and Rodeo through its NASA-Clear Creek-Friendswood Metro Go Texan Subcommittee."

J.D. Abrams Inc., which is working on the NASA Road 1 widening project, donated the roads and building pads for the structures; Nations Bank/West University Branch and Lockheed-Martin endowed the Longhorn Fund with cash donations, and Harvest Fresh Seafoods Inc.

provided technical support.

"We still need two portable buildings about 10-by-20-feet and a 15-by-20-foot greenhouse to complete the structures requirements of the project," said Holick. "The school district has been contacted by a water well contractor who may provide the water well for crop irrigation and pond filling, but we still need pond liners, aerators and associated equipment for the aquaculture ponds."

The rodeo subcommittee has organized several fundraising activities including the sale of inscribed bricks to be used as pavers in a visitor viewing area along the fence-line of the Longhorn Project.

The Longhorn Project is a joint effort of the Clear Creek Independent School District, JSC and the Houston Livestock Show & Rodeo through its NASA/ Clear Creek/Friendswood Metro Go Texan Subcommittee. The first of its kind

facility for high school-level agricultural education continues NASA's mission to work with the educational community to inspire students and create learning opportunities.

The project will allow students to learn about cattle care and breeding, aquaculture, and fruit and vegetable cultivation. The site is a 60-acre tract west of Rocket Park and bounded by Saturn Lane on the south and the Antenna Test Range on the north. The tract will consist of a 35-acre pasture for grazing, a 10-acre wildlife habitat pond, an 8-acre feedlot with a barn and storage shed, and seven acres for aquaculture ponds, gardens, orchards, a processing lab, and a greenhouse.

Through agricultural education, students learn science, mathematics and technology skills that are the cornerstones of expertise that will be needed to run the space program in the future.

## Engineers fan out to area classrooms

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Lockheed Martin, McDonnell Douglas, Rothe Development, SYSCOM Development and United Space Alliance.

To help prepare volunteers for their classroom presentations, JSC's Education Outreach Program held two orientation meetings in which a panel of experts discussed presentation tips and provided information on access to resources such as exhibits, videos, and promotional materials. Sandy Peck, a certified teacher from JSC's Teaching from Space Program, discussed with volunteers the important link between their unique careers at JSC and the opportunity to interact with students during National Engineers Week.

"You work in tomorrow. But, you will see tomorrow in the school room through the eyes of a young student.

You will hold in the palm of your hand the greatest natural resource this Earth can give, the inquiring mind of a young child or young adult," Peck said.

Rodney Rocha, a veteran volunteer in JSC's Education Outreach Program and Appearances Office, has been visiting classrooms for National Engineers Week since 1991. "Two of my goals are first, to demonstrate by examples the importance of science and engineering not only for application to the quality of life but also for survival in the next century, and second, to emphasize to young minds the importance of developing critical, objective thinking so as to make informed decisions vital to their future," Rocha said.

During his visit to an eighth-grade Earth Science class at Harby Junior High School in Alvin, Rocha dis-

cussed Isaac Newton's laws of motion and gravity which are employed not only by astronomers and physicists, but by NASA engineers involved in the design of space vehicles. "I used an interactive Socratic process in which I also asked students several questions, posed interesting 'thought problems' and their solutions, and emphasized the power of mathematics to investigate nature and the universe," Rocha said. "I used the blackboard quite a lot."

As part of the Discover "E" program, JSC volunteers will visit classrooms to show students how math, science, and engineering create the world around them and introduce them to technical careers.

For more information about how to become a volunteer in the Education Outreach Program, call x32929.

## Space News Roundup

The **Roundup** is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every Friday by the Public Affairs Office for all space center employees.

The Roundup office is located in Bldg. 2, Rm. 181. The mail code is AP2. The main Roundup telephone number is x38648 and the fax number is x45165.

Electronic mail messages should be sent to the editor, [khumphri@gp301.jsc.nasa.gov](mailto:khumphri@gp301.jsc.nasa.gov) or the managing editor, [kschmidt@gp301.jsc.nasa.gov](mailto:kschmidt@gp301.jsc.nasa.gov).

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## Goldin says planning helps NASA deliver

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Daniel S. Goldin said new management and planning efforts such as the zero-base review, program management system, and agency/enterprise strategic plans are helping NASA deliver, "faster, better and cheaper programs to meet our customers' needs." He said the NASA Strategic Plan "provides a clear statement of our vision and mission and a road map to the future.... It explains what we will do in the future, for whom and why."

A brochure summarizing the handbook was distributed to all JSC employees this week.

JSC Director George Abbey has instructed JSC supervisors to meet with employees to discuss these management and planning activities and their relationship to JSC work.